INTEGRATING THE VALUE OF ECOSYSTEM SERVICES IN THE COCOA VALUE CHAIN:

THE CASE OF THE DAULE-VINCES IRRIGATION PROJECT IN THE GUAYAS RIVER BASIN, ECUADOR.

In Ecuador, one of the fastest growing crops in the coast is cocoa, whose production, processing, consumption or export, generates positive and negative impacts on ecosystems. It is important to consider that Ecuador is the fourth largest exporter of cocoa in the world, first in Latin America, and world leader in the export of high quality cocoa (54% market share), from which about 80% is produced in the Guayas River Basin. In turn, cocoa is one of the products priority in government plans seeking the conversion of the productive matrix of the country. However, new environmental regulations, particularly in Europe, could endanger the export of cocoa, mainly by the presence of heavy metals, and thus affect the country's economy and the survival of small farmers dedicated to this activity.

This report describes the final results of TEEB Ecuador (The Economics of Ecosystems and Biodiversity - Ecuador) – a study on the integration of the value of ecosystem services in policies towards a sustainable and inclusive cocoa value chain in Ecuador. TEEB Ecuador will conduct a watershed level assessment of ecosystem services in the influence area of the irrigation project Dauvin, in the Guayas River Basin, Ecuador. This irrigation project is one of the 14 mega works built by the current government, whose objective is the provision of basic infrastructure to support the strategy of changing the productive matrix.

The ESPOL, the TEEB Ecuador host institution, implements the study under the policy guidance of a multi-stakeholder Steering Committee lead by the Ministry of Environment as focal point of TEEB Ecuador. The study is supported by the TEEB Office, administered by the United Nations Environment Program (UNEP). Three questions motivates this study: i) What are the impacts of specific agricultural practices over soil fertility, water quality and contamination of cocoa beans?; ii) What would be the economic (value) impact of such practices over ecosystem services in case of an increase in the cocoa production area in the Dauvin Irrigation Project?; and iii) What policies or actions could be valid to promote sustainable cocoa production areas, which also help to increase ecosystem services in the Dauvin irrigation project?.

The results obtained indicate that there is a positive relationship between certain agricultural practices and the agro-edaphic-climatic aptitude of the study area for cocoa production. In turn, these conditions have an influence on crop productivity, and therefore on the socio-economics of this important sector of the Ecuadorian economy.

Detailed results of this study can be requested to:

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